

Plant Ecology

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By Prof. John E. Weaver and Frederic E. Clements. Second edition. (McGraw-Hill Publications in the Botanical Sciences.) Pp. xxii+601. (London and New York: McGraw-Hill Book Co. Inc., 1938.) 30s.

THE first edition of this text-book was published in 1929 with 520 pages. The short preface to the new edition, dated January 1938, points out in concise phrases some of the more important advances in plant ecology made in less than a decade. The wide acceptance of succession as a basic principle in the study of vegetation has led to a better understanding of invasion, ecesis, and the stabilization of climax vegetation. The use of plant species and plant communities as indicators, the changed concept of xerophytism, and improved methods of studying the environmental factors are among the advances which are enabling the ecologist to grasp the complex interactions of plant life. Particularly important to the plant ecologist are the new conceptions of the vast importance of climate and vegetation in soil development. On the applied side, too, plant ecological studies are making great advances. Erosion, largely due to man's misuse of the natural plant cover, has been realized as a problem of national and international importance.

Ecology suffers in its presentation from an inherent drawback which is not so evident in some other biological subjects. It depends very much upon taxonomy, and floras differ greatly in different parts of the world. The synecologist has to name

and ecologically to describe and classify the species components of the vegetation with which he is concerned. It follows that much of his description can only be followed, or at least fully appreciated, by biologists familiar with the local flora.

In text-books, the general principles have to be exemplified by reference to plants the very names of which may be new to foreign readers, many of whom will certainly have no personal acquaintance with the plants themselves. An ecological text-book has, therefore, its greatest value in one country—that from which the author takes his examples. The authors of the work here reviewed take the vast majority of their examples from North American vegetation. While it is true that they have not overburdened their text with plant names, and illustrate the book freely with photographs and other reproductions, most of the species mentioned, and a fair proportion of the genera, will be unknown to most British readers. Differences of size, climate, physiography, and economic history between the United States and the British Isles also hinder this book from being an ideal text-book for use in the latter. On the other hand, the enthusiasm of the authors for their subject, the very full statement of general principles, and the comprehensive bibliography (of 1035 references) must make the work extremely valuable for reference. It is, so far as Great Britain is concerned, a book for the teacher rather than for the school or college student, and as such it can be heartily recommended. W. B. TURRILL.

Iris Patterns and their Inheritance

Structural Variations of the Human Iris and their Heredity

with Special Reference to the Frontal Boundary Layer. By Dr. Viggo Eskelund. Pp. 243. (Copenhagen: Nyt Nordisk Forlag Arnold Busch; London: H. K. Lewis and Co., Ltd., 1938.) 21s. net.

THE laws of inheritance of blood groups and types are now so well established that in certain cases paternity can be definitely excluded. Dr. Eskelund believes that the various patterns of iris found in man could also be classified on an hereditary basis, and eventually perhaps provide equally good or even better evidence of paternity.

In a laborious study of photographs of the living iris in 154 subjects conducted under the auspices of the P. Carl Petersen Foundation at the University of Copenhagen, he has arrived at certain preliminary conclusions which will interest without convincing most of his readers. He holds that iris pattern can be definitely classified into types. To achieve this, one must take the anatomical conditions of the various regions (for example, anterior and posterior layers of the stroma, uveal border, presence or absence of crypts, depth of colour and distribution of chromatophores, etc.) and arrange them under headings of combinations of variables.

The author's description of the various types is rendered slightly difficult for English readers by